

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims

1. (Currently Amended) A method of operating a transmitting/receiving station of a wireless communication network in antenna diversity mode, this station having a plurality of reception antennas, wherein it consists in the method comprises the steps of:
 - listening to the communications between two other transmitting/receiving stations of the network, successively on each reception antenna, by picking up frames transmitted by one of the transmitting/receiving stations; and
 - analysing the quality of listening on each reception antenna so as to identify a reception antenna from among the plurality of reception antennas which sets up the best communication link with one of the said other two transmitting/receiving stations.
2. (Previously Presented) The method according to claim 1, wherein one of the two other transmitting/receiving stations of the network is an access point of the network
3. (Currently Amended) The method according to claim 1, wherein the analysis of the quality of listening is validated on reception of an acknowledgement frame- identification of the reception antenna is validated by picking up an acknowledgement frame transmitted by one of the transmitting/receiving stations.
4. (Currently Amended) The method according to claim 1, wherein the analysis of the quality of listening is based on a measurement of the power of the signal in terms of reception of a DATA frames originating from the said other stations transmitted by one of the transmitting/receiving stations, and on the recording of the result of this measurement in a table in correspondence with the identifier of the tested reception antenna.
5. (Currently Amended) The method according to any of claims 1-to-4, wherein the analysis of the quality of listening is based on a measurement of the synchronisation data contained in the preamble of a DATA frame and on the comparison of the this synchronisation data with of a frame originating from the said other stations with

predetermined data prerecorded data to get an error message that characterizes the reception performance of the tested antenna.

6. (Currently Amended) The method according to claim 4, wherein the analysis of the quality of listening is based on the synchronisation data contained in the preamble of a DATA frame and on the comparison of the synchronisation data with prerecorded data to get a confidence indicator that characterizes the reception performance of the tested antenna ~~a combination of a measurement of the power of the signal in terms of reception of frames originating from the said other stations and of a comparison of preamble with predetermined data for a first tested antenna and on a measurement of the power of the signal in terms of reception of frames originating from the said other stations for second antennas to be tested.~~

7. (Canceled)

8. (Previously Presented) The method according to claim 6, wherein said comparison is a correlation measurement.

9. (Currently Amended) A transmitting/receiving station having a plurality of reception antennas for operating in antenna diversity mode in a wireless communication network, wherein it comprises:

- means for listening to the communications between two other transmitting/receiving stations of the network, successively on each reception antenna by picking up frames transmitted by one of the transmitting/receiving stations,
- means for analysing the quality of listening on each reception antenna so as to identify a reception antenna from among the plurality of reception antennas which sets up the best communication link with one of the said other two transmitting/receiving stations.

10. (Previously Presented) The station according to claim 9, wherein one of the two other transmitting/receiving stations of the network is an access point of the network.

11. (Currently Amended) The station according to claim 9, wherein the analysis of the quality of listening is validated on reception of an acknowledgement frame identification of the reception antenna is validated by picking up an acknowledgment frame transmitted by one of the transmitting/receiving stations.

12. (Currently Amended) The station according to claim 9 wherein the analysis of the quality of listening is based on a measurement of the power of the signal in terms of reception of a DATA frame transmitted by one of the transmitting/receiving stations, and on the recording of the result of this measurement in a table in correspondence with the identifier of the tested reception antenna frames originating from the said other stations.

13. (Currently Amended) The station according to claim 9, wherein the analysis of the quality of listening is based on a measurement of the synchronisation data contained in the preamble of a DATA frame and on the comparison of the synchronisation data with prerecorded data to get an error message that characterizes the reception performance of the tested antenna of a frame originating from the said other stations with predetermined data.

14. (Currently Amended) The station according to claim 12, wherein the analysis of the quality of listening is based on the synchronisation data contained in the preamble of a DATA frame, and on the comparison of this synchronisation data with prerecorded data to get a confidence indicator that characterizes the reception performance of the tested antenna a combination of a measurement of the power of the signal in terms of reception of frames originating from the said other stations and of a comparison of preamble with predetermined data for a first tested antenna and on a measurement of the power of the signal in terms of reception of frames originating from the said other stations for second antennas to be tested.

15. (Canceled)

16. (Previously Presented) The station according to claim 14, wherein said comparison is a correlation measurement.

17. (Currently Amended) A wireless communication network wherein the network comprises one or more stations according to claim 9.